

RECEIVING APPARATUS, TRANSMITTING APPARATUS, AND
COMMUNICATION SYSTEM

ABSTRACT OF THE DISCLOSURE

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10 A receiving apparatus and transmitting apparatus
capable of reliably transmitting and receiving a high
speed optical signal and a communication system using the
same, wherein provision is made of a transmitting
apparatus comprising a conversion circuit for converting
15 serially input data to a plurality of bits of parallel
data given predetermined information and an LED array
comprised of LED units of at least a number corresponding
to the number of bits of the parallel data from the
conversion circuit arranged in an array, wherein the LED
units are controlled in light emission in parallel based
on bit information of corresponding parallel data to emit
information light dispersed in a spatially predetermined
range, and of a receiving apparatus having a photo-diode
20 array comprised of a plurality of photo-diodes for
emitting electric signals of levels in accordance with
amounts of light received arranged in an array, wherein
the photo-diodes output electric signals in parallel, for
selecting information in accordance with the information
25 light based on the plurality of electric signals output

in parallel from the photo-diode array, converted selected parallel data to serial data, and output the same.

[illegible]